Director, PIC

19 May 1959

Special Assistant to the Director, PIC

Interservice Coordination Committee for Airborne Photographic Equipment - Wright Air Development Center - 5 May 1959

- 1. Colonel A. L. Wallace, Jr., Chief, ARL at WADC, opened the meeting with a proposal for more cooperation and a request for greater energies to be spent in the Interservice R&D effort. He stated that the Air Force has three wings of RB-66's now deployed and one in the states; these are to be phased-out in 1962, and no new vehicle has as yet been discovered for replacement. The Colonel further urged the interservice use of the Wright-Patterson Labs where high altitude environments can be duplicated for developing taking systems. Captain Kiem of the United States Navy concurred with Colonel Wallace in a brief rebuttal speech.
- 2. Lt. Colonel Norman Gray of the Combat Surveillance Agency gave "The Army's Plans until 1970." The Army is placing a lot of faith in Project MICHIGAN and is waiting for a report on recommendations as to what PI gear to purchase.
- 3. Mr. Castellini of Fort Monsouth next gave what the Army plans to spend in 1960; i. e.:
 - (a) \$50,000 Photo-polymerization Ansco.
 - (b) \$150,000 Experimental panoramic Camera using stationary optics Old Delft.
 - (c) \$50,000 Contrast Control during taking process using various slit widths Fort Monmouth.
 - (d) \$1,000,000 PI equipment as recommended by Project MICHIGAN.
 - (e) \$300,000 70mm long focal length camera for ground use with Automatic Processing Polaroid.
 - (1) \$50,000 Phosphor printer similar to Goertz Fort Monmouth.

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- 4. Captain Reed, USAF of ARDC, gave the Air Force budget of those items that the Air Force allowed him to disclose.
 - (a) Project No. 6272 \$600,000 Photo materials, processors, and techniques which will give a high quantum yield and will remain nuclear radiation resistant.
 - (b) Project No. 6170 \$200,000 Light Amplification, solid state approach.
 - (c) Project No. 6175 \$100,000 Reconnaissance electrophotography.
 - (d) Project No. 6171 Not as yet funded Photo Receptors, large single crystals.
 - (e) Project No. 6273 \$350,000 Optical Technology.
 - (f) Project No. 62720 \$100,000 Defraction Limited Lenses.
 \$103,000 Service test of two of above lenses 300 lines/mm.
 - (g) Project No. 62722 \$50,000 Night Photo Optics
 - (h) \$57,000 to buy a radiation resistant lens of a long focal length.
 - (i) Project No. 6721 \$50,000 1200 super wide angle lens.
 - (j) Project No. 6220 \$1,981,000 Aerial Photo Reconnaissance Techniques.
 - 1. Task No. 62524 \$100,000 Night Ambient Light photography.
 - 2. Task No. 62799 \$260,000 Extremely high altitude techniques.
 - 3. Task No. 52794 \$225,000 Hypersonic Flight Effects on Aerial Reconnaissance.
 - 4. Task No. 62481 \$631,000 Satellite Photography Dynamic Analyzer.

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- 5. Task No. 62799 \$611,000- Catadioptric Lenses Large Aperture Lens for UV detection 2000 to 4000 Angstrom range for 70mm film.
- (k) Project No. 6263 \$600,000 Electronic Photographic Reconnaissance.
 - 1. Task No. 62766 \$300,000 Development of a TV photo tape sensor 70mm at 60 megacycles with a resolution of 100 1/mm. No cathode ray tube RCA.
 - 2. Task No. 62178 \$300,000 Advanced reconnaissance mount techniques.
- (1) Project No. 6231 Task No. 62499 \$180,000 In Flight Ultra-Rapid Processor Ansco.
- 5. CDR O'Reilly of BuAER PH gave the Navy's Budget.
 - (a) CA 03501 \$148,000 Miniature firing error camera.
 - (b) IO 13501 \$75,000 Single Panoramic Camera 12" 70mm for F8U-1P ITEK.
 - (c) CA 03501 \$750,000 Photo Scanning Transmission System - Chance Vought.
 - (d) 1. IO 13501 \$30,000 PI Key"Coke, Iron, and Steel PIC."
 - 2. \$35,000 PI Key, "Exotic Fuels and Rare Metals."
 - 3. \$35,000 Viewer for Comparative Analysis of Sensor Records.
 - 4. \$35,000 Viewer for Panoramic Photography.
 - 5. \$40,000 Master Terrain Model System.
 - (e) IO 13401 \$120,000 Rocket and Satellite Photo Systems Project HUGO.
 - (f) AS 40502 Day and Night Anti Submarine photo system.
 - (g) CA 03501 \$35,000 Radar Prediction and Validity Systems.
 - (h) \$14,000 Unique Radar prediction techniques.

CERTET

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- (i) \$10,000 PI Study on Human Factors and PI. Tufts.
- (j) IO 13401 \$35,000 Maximum utilization of extremely small scale photography.
- (k) IO 13501 \$100,000 Zerographic Plate Research.
- 6. Major Schatzley of RADC spoke on Rome's projects.
- a. Rome is working on the integration of data from individual sensors. This is a multianalysis type of work using infrared, radar, photography and any other sensors. They have a milk run set up from Buffalo to Boston. Through the statistical treatment of data, they are able to show trends. This seems to be similar to the Dr. Heidelauf-Autometric proposal.
- b. Aereo Services is performing a study for Rome on "Ways to Approach Small-scale Photography."
 - c. Basic Study of Inter-Planetary Surveys.
- d. Ohio State is performing a study on oblique mensuration and will come up with a design for an oblique slide rule.
- e. A rear projection viewer that will take 35mm to 9×9 is now being funded called the AR 21.
- f. Rome is working on an automatic recognition device to scan aerial photography.
- g. Ohio State is working on scanning techniques namely a moving spot of light to draw the eye.
- h. Rome is not working on group interpretation until the problems for the individual have been licked.
- i. Rome is performing a study on a space coordinate system. They have not as yet decided whether it should be solar centered, earth centered or galaxy centered.
- 7. Resolution Targets were discussed. Those now existing are: Air Force: 2 at Elgin
 - 6 at Wright Patterson
 - 1 at Edwards

Navy: Mechanicsburg, Pennsylvania

Army: Building a set in New Jersey.

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- 8. The Air Force demonstrated its prototype Dynamic Analyzer Machine for Aerial Reconnaissance Systems. It will:
 - a. Pinpoint cause of loss of resolution.
- b. Cut flight tests 60 80 percent. A newer, more sophisticated machine will be completed in February 1961. Program time is now available on the existing machine.

WEDNESDAY, 6 MAY 1959

- 1. It was decided unanimously that 5 inch film will continue to be unperforated.
- 2. The Air Force is attempting to standardize resolution measurements on cathode ray tubes probably lines/mm.
- 3. The Army has been cleared by the FCC to test the transmission of photos, drone to ground, at 2250 megacycles on the Fort Huachuca drone firing range.
- 4. The Army, Navy, and Air Force representatives then presented Enclosures 3, 4, and 5 respectively and discussed the various pieces of hardware. It is to be noted that APEL is working with a catadioptric lens.
- 5. The next meeting will be held at Fort Monmouth, New Jersey, in the vicinity of 20 or 21 October to be announced later by Mr. Castellini. The agenda will contain camera mounts, lenses (both domestic and foreign), control systems, and data recording.

THURSDAY, 7 May 1959

- 1. The Atomic reactor which is about 75 percent completed was visited at Wright Patterson. It will have the capability of taking an experiment 5' x 7' x 9' weighing 10,000 pounds.
- 2. The rest of the laboratory facilities were visited during the day, and the following items of note were seen and discussed:
 - a. Moonlight photography.
 - b. Single large silver bromide crystals. (Enclosure 6)
 - c. Photographic recording mediums other than silver.
 - d. Internal vibrations and their effects on the performance of aerial photography. (Enclosure 7)

